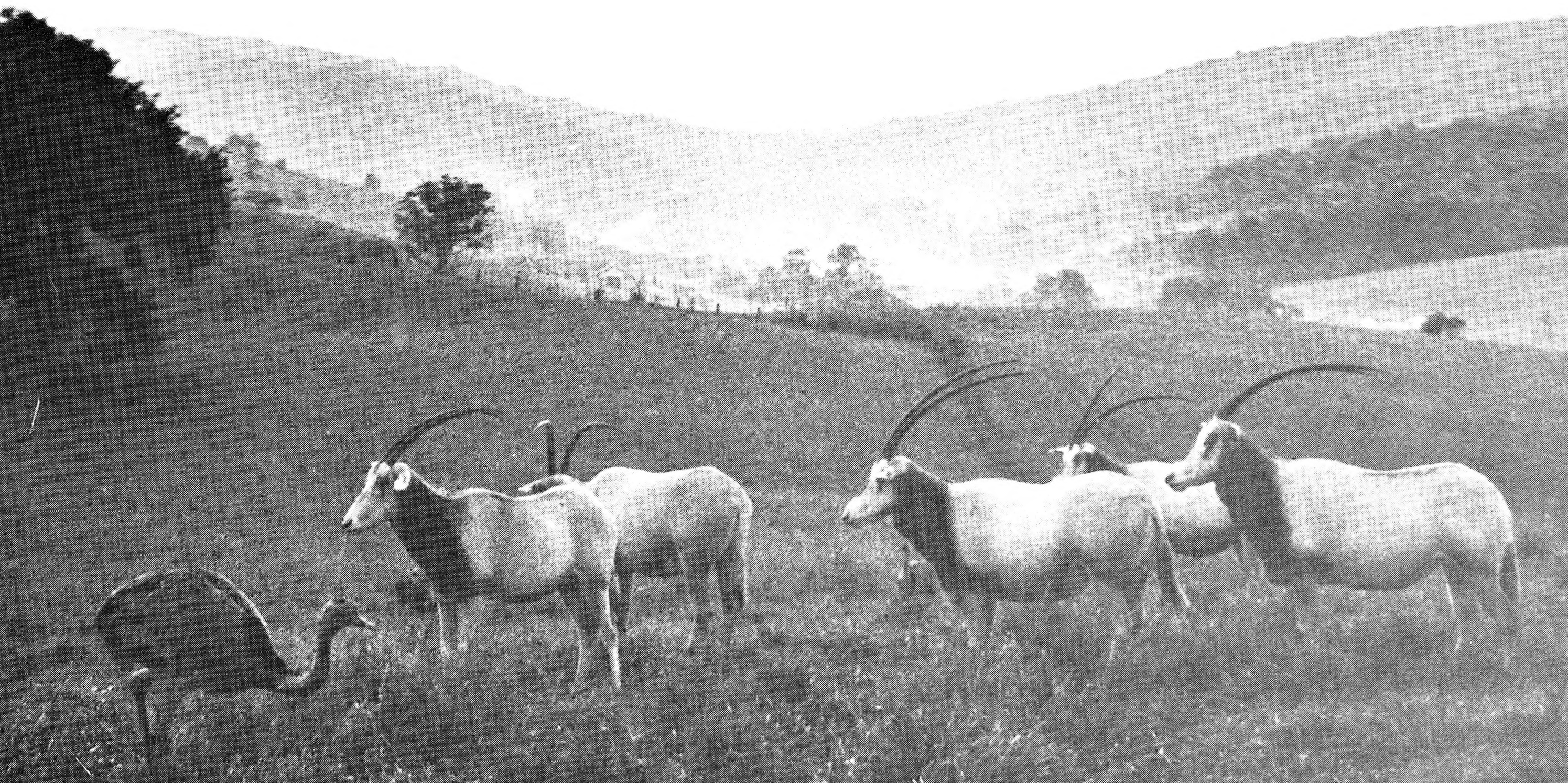


# THE ZOO GOER





volume 5, number 4  
**July/August 1976**

## contents

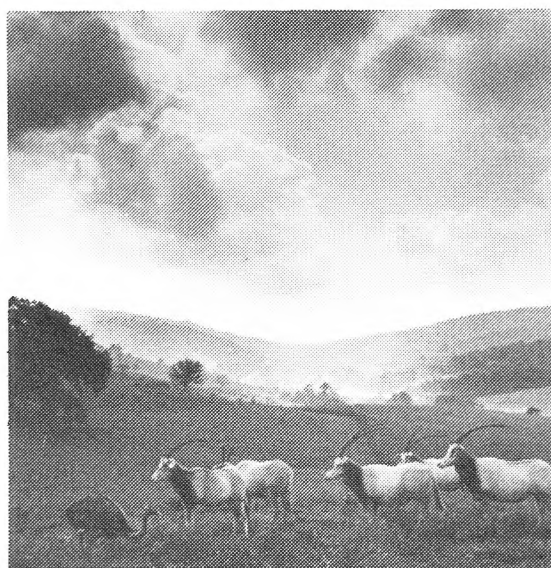
**3 Front Royal**

**8 ZooNews**

**13 Waterfowl**

**20 BookNews**

**22 FONZNews**



**Front Cover:** Like a scene from the peaceable kingdom, rare scimitar-horned oryxes from Africa and flightless rheas from South America are among the exotic animals now roaming and breeding at the Zoo's Conservation and Research Center in Front Royal, Virginia.

**Back Cover:** Fanning waterproofed wings for takeoffs and landings, this Hawaiian duck is so rare that less than 500 wild specimens survive only on Kauai island.

**Design-Production:**  
**Monica Johansen Morgan**

Photographs on page 10 by Smithsonian Institution, all others by Francie Schroeder. Drawings on page 20 by Philip Jones, courtesy of Crown Publishers, Inc.



is a non-profit organization of individuals and families who are interested in supporting Zoo education, research, and conservation.

### FONZ Board of Directors 1975-76

Arthur W. Arundel, *President*  
Montgomery S. Bradley, *First Vice President*  
John S. Brown, *Second Vice President*  
Stephen T. Hosmer, *Treasurer*  
Julie P. Hubbard, *Secretary*

Peter C. Andrews	Lavell Merritt
Theodore Babbitt	Robert Nelson
Edward Boehm	Ruth Nelson
Victor Delano	John B. Oliver
Timothy V.A. Dillon	Nancy Porter
Ronald Field	Wayne Quin
M. Anthony Gould	Ted Rivinus
Joan L. Jewett	Rebecca Schergens
Donna K. Grosvenor	Lee Talbot
Nella Manes	Sally Tongren
Cecil McLelland	Gerald Wagner
Shirley McNair	

### FONZ Staff

Sabin Robbins, *Executive Director*  
Dennis Baker, *Associate Director*

#### Office Heads

Susan Trencher, *Education & Volunteer Services*  
Monica Morgan, *Membership & Publications*  
Mike Gill, *Food Services*  
Claire Farnsworth, *Merchandising*  
Renee Caldwell, *Trains & Parking*  
Norma Gay, *Accountant*

As a FONZ, you and your family receive many benefits—publications, discount privileges, and invitations to special programs and activities—to make your zoogoing more enjoyable and educational.

**THE ZOOGOER** is published bi-monthly and copyrighted © by Friends of the National Zoo, c/o National Zoological Park, Washington, DC 20009, second class mailing permit approved at the Washington, DC rate in the United States \$3 a year (of annual dues).

### Zoo Staff

Dr. Theodore H. Reed, *Director*  
Mr. Edward Kohn, *Deputy Director*

#### Office Chiefs

Mr. Jaren Horsley, *Animal Management*  
Dr. Christen Wemmer, *Conservation & Research Center*  
Dr. Mitchell Bush, *Animal Health*  
Dr. Richard Montali, *Pathology*  
Dr. John Eisenberg, *Zoological Research*  
Mr. Emmanuel Petrella, *Facilities Management*  
Mr. Robert Engle, *Construction Management*  
Mr. Joseph Reed, *Management Services*  
Mr. Robert Mulcahy, *Graphics & Exhibits*  
Ms. Judy White, *Education & Information*  
Mr. Samuel Middleton, *Police & Safety*





**Front  
Royal**



**I**t's breed or go out of business," explained Director Ted Reed when the National Zoo established its breeding farm at Front Royal, Virginia, in 1974. After two years, breeding is booming at Front Royal!

Since last spring, 23 animals have been born, most of them rare or endangered species. Presently roaming the 3,150-acre Conservation and Research Center are herds of onagers, the wild asses of Asia, Bactrian camels, scimitar-horned oryxes, Reeve's muntjacs, zebras, and Pere David's deer, which survive only in captivity. Most importantly, nearly all species at Front Royal have successfully adapted and bred in captivity.

More rare animals are expected soon, including a herd of wisent, or European bison, two pairs of golden marmosets, Matschie's tree kangaroos, binturongs, and Bali mynahs.

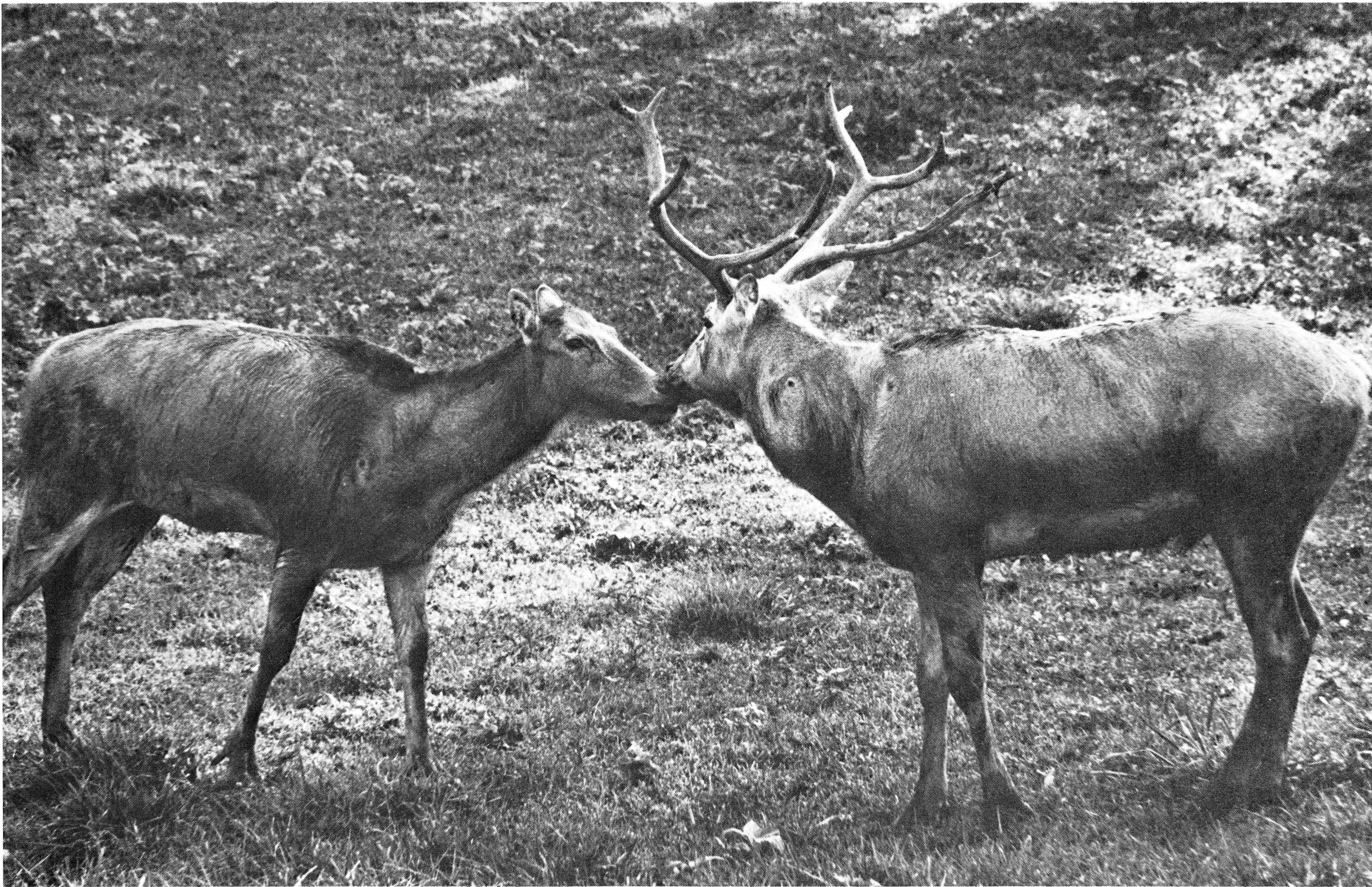
In 1974 two male and four female common gray rheas were brought to Front Royal to see if they were hardy enough to withstand winters in the Blue Ridge. All survived the first year except one killed by a bobcat. Last April, 10 chicks were hatched by one bird and 14 more were successfully

**Previous Page:** Kicking up its heels, this high-spirited onager, or wild ass of Asia, is part of a herd being studied and bred at Front Royal. Characterized by long ears and a coarse wiry mane, the onager serves as a hardy pack animal in Mongolia and Tibet.

Exploring the grassy fields of Front Royal, these common gray rhea chicks are among the more than 20 that have hatched successfully since last Spring.







**No longer surviving in the wild, the Pere David's deer, like those in the breeding herd at Front Royal, symbolize the vital role that zoos can play as modern-day Noah's arks.**

reared by a second bird in May. Soon a group of eight endangered Darwin's rheas acquired from the San Diego Zoo will be released from quarantine, so a second species of rhea will soon inhabit the fields at Front Royal.

Sometimes unexpected problems occur when trying to breed exotic species. Last December, the Center received a breeding loan of two male and seven female Pere David's deer from the New York Zoological

Society to provide "new blood" for the Front Royal herd. But the New Yorkers were surprisingly tame compared to the National Zoo herd, and they waited patiently each morning for the keepers to distribute pellets to







the food bins. By the time the National Zoo animals got to the barn to feed, the gluttoned New Yorkers had emptied the food troughs! Separate paddocks had to be built until the first flush of grass in early spring.

Successful breeding depends heavily on proper housing and paddocks. Recently six buildings were converted into first-class housing for small mammals and birds. The old farm granary was made into an animal commissary with facilities and equipment for food storage and preparation. Hoofstock barns were winterized. Several miles of fence created additional paddocks.

The Conference Center at Front Royal has proved to be a popular site for scientific gatherings. Four conferences have been held in the last year including symposia on lizards, golden marmosets, and tree-dwelling leaf-eaters.

As hoped, the National Zoo's Conservation and Research Center is living up to its name by playing an increasingly significant role as a modern-day Noah's ark.

**by Dr. Christian Wemmer**  
**Curator in Charge**  
**NZP Conservation &**  
**Research Center**

Looking like a long-legged cross between dog and fox, the maned wolf is one of three South American canids being studied at Front Royal along with crab-eating foxes and bush dogs. Emphasis will be on comparative social behavior, interaction, and communication.

Young animals, like this onager colt, typify the baby boom that is making Front Royal a center for breeding of endangered species.





## Master Rockmaker Prepares Bear Exhibits

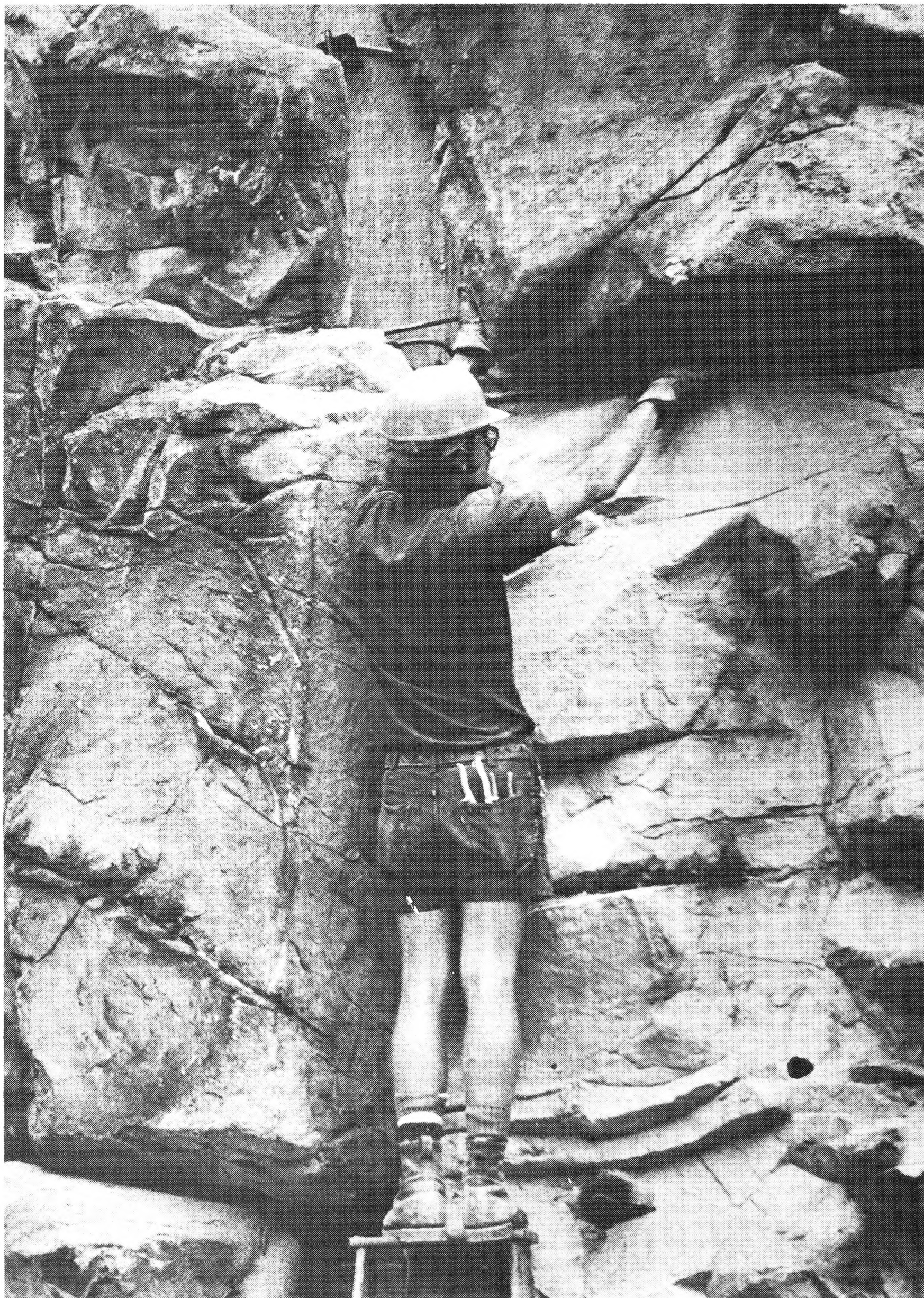
Earthquakes, floods, fires . . . all have been staged by the master counterfeiter of them all—Hollywood.

So, the National Zoo has turned to one of Hollywood's most gifted artists to recreate realistic rock grottos for the new bear exhibits, scheduled to open in the spring of 1977. "Geologists can't tell my rocks from the real thing at a two-foot distance," claims creator Julian George.

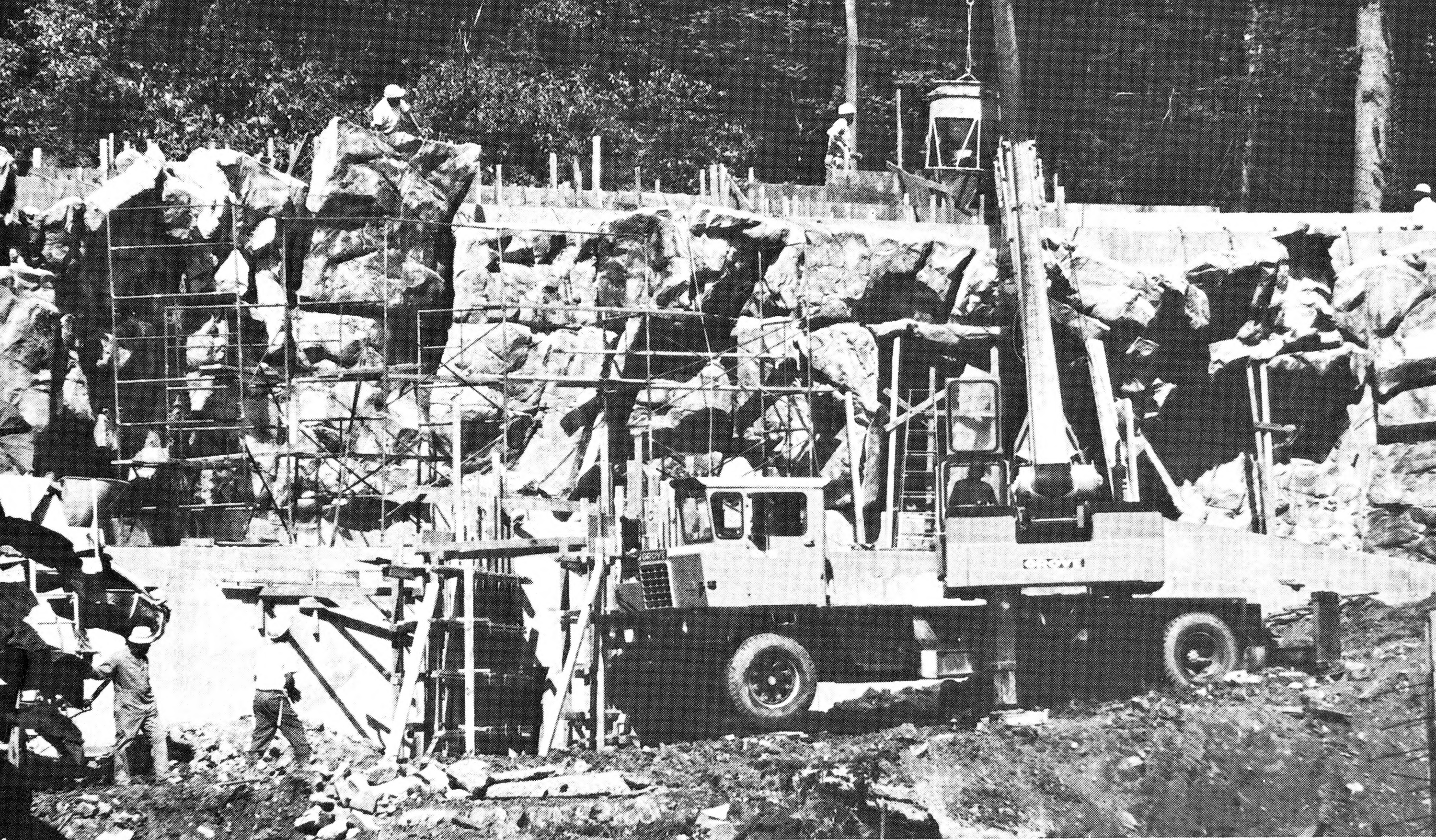
Unlike movies, however, Zoo exhibits must do more than mimic nature. The structures must provide safe and sure confinement to keep the bears in and the people out. And they must meet the special needs of the bears, appeal to visitors, and be durable enough to withstand decades of weather, constant cleaning, and very strong, digging animals.

In the past, zoos have used sprayed concrete, or gunite, to give a rock-like appearance to exhibits. The problem is that sprayed concrete has a uniform appearance and none of the details found in real rock formations. Gunite "rock" looks artificial.

**A worker carefully joins two rock molds which form part of the simulated cliff backdrop for the new bear exhibits.**







**Like a giant jigsaw puzzle, each 5,000-pound piece of simulated stone is being precisely fit together so that the completed rock cliff will fool even a geologist at close range.**

On the other hand, Mr. George makes rock grottos by carefully copying real rocks. His technique sounds simple, but it isn't. It requires expert knowledge in handling plastic, rubber, and concrete, plus the creative talents of a sculptor and a painter. Mr. George begins by making thin, flexible plastic impressions of actual rocks and cliffs in the Washington area. Different impressions are then joined and plaster-of-Paris casts are made. They, in turn, are used to form rubber and plastic foam molds. Colors are care-

fully added to the inside surface of the molds to match the natural rock colors. Then about 5,000 pounds of liquid concrete are poured into each mold and allowed to set. The artificial rock is lifted by crane, fitted, and bolted in place at the exhibit. Finally, large cracks between the rocks are filled with poured concrete to produce a very large, single rock face.

When these moated exhibits are completed, the bears will roam freely at the base of sheer "stone" cliffs.

The result of Mr. George's stonemaking methods is so realistic that an admiring Walt Disney once sent a special team just to study them. From the Zoo's standpoint, Julian George's rocks are even better than the real thing. They fit!

**by Michael J. Morgan  
Public Information Assistant**



## Beaver Valley Due For Major Face-Lift

By early 1978, zoogoers will be able to watch frolicking otters and sea lions through underwater windows, stroll by a woods full of wolves and bush dogs, and marvel at beavers actually building dams.

It's all part of the next new exhibit—the Beaver Valley project—due to begin in a few months. The area to be developed is across from and on

either side of the present cheetah yards, which will remain as is except for minor fence changes.

In keeping with the "natural look" philosophy of the Master Plan, all new buildings, exhibits, fencing, and walkways will blend into the natural landscapes. In addition to carefully preserving existing trees, landscape architect Lester Collins will reinforce the informal, wooded atmosphere with selected plantings.

Beginning at the Rock Creek, or south end of Beaver Valley, a footpath will

lead visitors from the new grizzly bear exhibit up to the California sea lion pool. Here, several large underwater windows will give zoogoers a special look at the cavorting group of sea lions. In addition, the 165-foot-long pool will be large enough to accommodate breeding groups. Rocky islands and a sand beach will be provided to encourage whelping and "haul out" of pups. Julian George, the artisan famed for his simulated rock formations, will create the realistic rock surroundings. Separate "holding" pools will be available for animals undergoing treatment.

**Beavers at the zoo will be busy building dams and paddling in and out of their dens if all goes as planned at the innovative Beaver Valley exhibit to begin soon.**





Curved benches around one side of the sea lion pool will give visitors a “front row seat” for longer and more relaxed watching of these fascinating sea mammals.

Just above the sea lions will be an island-studded pool for harbor seals. Observation areas will let visitors view these animals away from the main walkway.

Wolves and bush dogs will prowl the woods across from the cheetahs. Unobtrusive curved moats and screened fencing will separate the animals.

At the top of Beaver Valley, there will be a colony of beavers on one side, North American river otters on the other. The beavers will have their own pool along with material designed to encourage them to build dams. Visitors will be able to look through windows into the actual den. The interior den will be red lighted so that the beavers will think it is dark and private. An overview of the dam will be provided by an off-path observation area.

The otter pool will have underwater windows for an unusual view of these playful creatures.

Architects for the Beaver Valley Project are The Kent Cooper Partnership. The complex is expected to take about a year to complete.

**by Norm Melum**  
**Staff Architect**

## **Zoo Photography: Challenging and Fun**

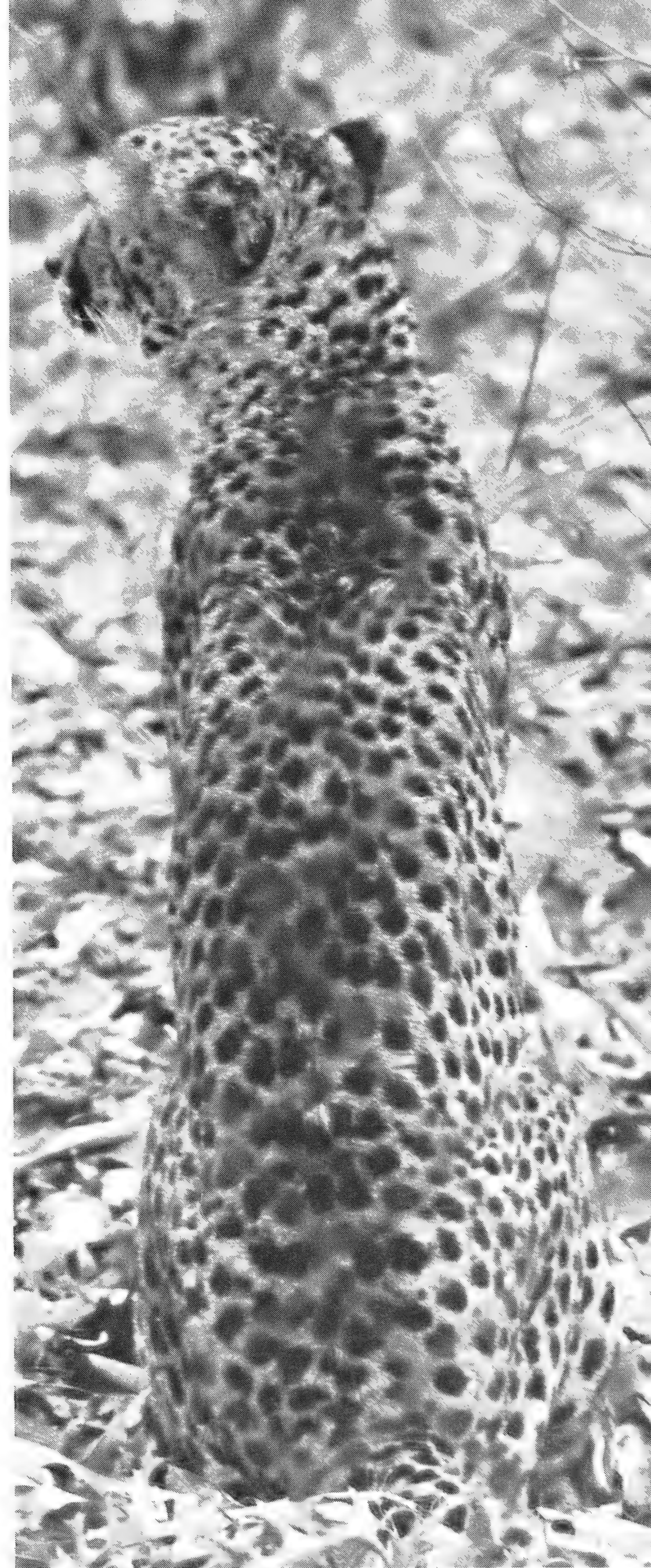
Sst, grrr, sssst. Oh, please, tiger, look this way, cock your head, growl . . . oh, please!

Trouble is, the tiger at the Zoo has heard those strange human noises before. He has learned that, for him, there is no danger or pleasure associated with them. He also feels that there is nothing better than a shady spot for a long midday nap.

If you want to take good wildlife pictures at the National Zoological Park, you will have to try methods other than funny noises. You will have to know something about your camera, something about the Zoo, and something about the individual animals.

Zoo visitors use so many different kinds of cameras that it is impossible to give specific technical advice here. Just know your own equipment; consider its possibilities and its limitations. The simplest instamatic can take great shots if the person pushing the button LOOKS carefully first. Try to keep architectural lines as straight as possible; check the edges of your viewfinder for a chopped off foot or tail; include the subject's eyes whenever possible.

Although the Zoo's cheetahs are exhibited behind heavy, chain-link fencing, the photographer has used a long focal-length lens to “dissolve” the barrier and create a dramatic close-up.





The National Zoo has not always been an easy place to take good pictures. Now, however, fences and bars are disappearing. Barriers between the visitor and the animal are becoming unobtrusive. You can get closer, cleaner (meaning less background and foreground clutter) shots than before. Although a long focal-length lens is definitely an asset, picture takers can often get close enough to fill the whole picture with an animal using a normal lens.

Exciting pictures are made of alert, active animals. The most active times are mornings when the large animals first go into the yards, late afternoon just before they go back inside, and feeding times. Feeding times vary tremendously. Birds may nibble all day long, but some reptiles eat only once or twice a week. Zoo schedules vary with the seasons, so you might check the zoo information office for current schedules.

Cool air and falling leaves stimulate many animals. Hoofed stock, which appear to be sleeping or, at most, swishing their tails all summer, kick up their hoofs on fall mornings. Winter is not a bad time for zoo photography either. Imagine catching the pandas frolicking in the snow! Any time of day, any season, you can find busy birds; try getting some in flight. Sleepers rarely cause a stir. The hot middle part of a summer day is the poorest time for photography; it is a time for rest.

There are advantages to photograph-

ing animals outdoors. You don't have the technical lighting problems and glass spots and reflections you have indoors. There is a lot of shade in the Zoo. During the short days of the year, the sun may drop below the trees as early as 3:00 p.m. Choose a film with a high ASA, such as Tri-X or high speed Ektachrome (Kodak is about to market an even faster and supposedly higher quality slide film). There is such a wide range of light and shade in the great flight cage that a light meter, used frequently, is recommended. You might want to use a strobe or flash in some outdoor places.

It is difficult to avoid reflections off glass when you are taking pictures indoors. The more parallel the camera lens is to the glass and the closer to it, the fewer the reflections. Also, you can decrease reflection by having a friend hold a dark sweater or coat around you and the camera. Water spots and nose, paw, and finger prints are something you just have to watch out for and avoid as much as possible.

Many bird enclosures have only piano wires between you and the birds. These wires will not show in your photograph if you stay close to them and keep the shutter open to a wide aperture. Depending on your camera and the lighting conditions, you may be able to see the wires appear and disappear in your viewfinder as you move forward and backward. Take the picture when the wires are not visible.

The Zoo is a continual exciting photographic challenge to anyone—from the professional to the amateur—recording a happy family day. Each animal has his unique personality and expression for you to capture. But you must always respect the physical barriers between you and the animal. Climbing a fence or railing to get a closer shot can threaten the animal, make him cower, put his ears back, and move away.

Good pictures take patience, timing, and luck. If you see an animal do something great but miss the picture, have patience because, with any luck, he will do the same thing again. If you study him as you wait, you will develop a sense for his timing so you can anticipate the best moment to snap the shutter.

It has been a long hot day. That tiger is ready to cool off after his nap and before dinner. He opens his eyes, stretches, sits up, and looks about for any strangeness. Make sure your camera is ready! Something shiny has caught his eye. Splash! He's attacked the water. Did you get it?

**by Francie Schroeder**  
**Zoo Photographer**





**Share  
the joys  
of FONZ  
with your  
friends this  
holiday  
season.**



# application

Send a gift membership in my name \_\_\_\_\_ to: \_\_\_\_\_

nickname for gift enclosure \_\_\_\_\_

☐ Family\* \$20

☐ Individual \$10

☐ Couple \$15

☐ Junior\* \$3

☐ Senior \$5

NAME \_\_\_\_\_

PHONE \_\_\_\_\_

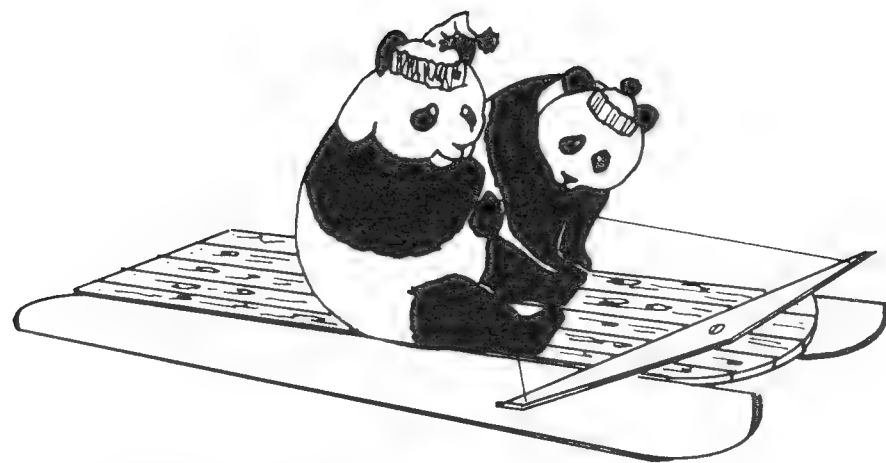
ADDRESS \_\_\_\_\_

OFFICE \_\_\_\_\_

\*CHILDRENS' NAMES & BIRTHDATES (Month & Year) \_\_\_\_\_

(Make checks payable to FONZ)





**SHARE THE JOYS OF FONZ  
WITH YOUR FRIENDS THIS  
HOLIDAY SEASON.**

Membership privileges and programs in 1977 will be the most exciting ever. There will be member-only events to celebrate the opening of new exhibits, plus invitations to special classes, films, lectures, trips, publications, discounts, and much, much more.

Best of all FONZ helps to save wild animals from extinction, supports public education programs, sponsors animal research and conservation, and improves the National Zoo.

Make your friends our Friends by giving a FONZ membership. It's a gift that both helps and delights. And you'll be remembered and thanked for it all year long.

(for additional gifts provide the  
information at left)

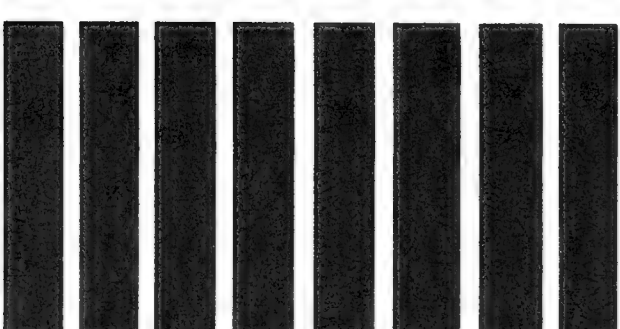


Your 13¢ saves  
us 15¢

FIRST CLASS  
PERMIT NO. 71430  
WASHINGTON, D.C.

**BUSINESS REPLY MAIL**

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES



**FRIENDS OF THE NATIONAL ZOO**  
c/o National Zoological Park  
Washington, D.C. 20009





# Waterfowl



**N**ow is the perfect time to enjoy the new waterfowl ponds on Bird House Hill. The swan's song, the ugly duckling, and the geese that guarded Rome are part of our folklore, but most zoogoers are not as familiar with the fascinating facts about this group of birds known as waterfowl.

**Previous page:** Named for its long, needle-like tail, this northern pintail hen also has a long neck that lets it feed on aquatic vegetation and insects without upending like most surface-feeding ducks. If an intruder approaches, up shoots the neck to let the bird scan the territory.

**Broad, webbed feet enable the black swan of Australia to paddle effortlessly and swiftly on ponds and lakes. A long neck allows it to forage plants growing along the bottom. To become airborne, the big bird must race across the water 100 feet or so, its webbed feet kicking up a plume of spray ten feet high.**

There is no difficulty recognizing them. They are swimmers exquisitely adapted for an aquatic environment. Well-oiled feathers and an undercoat of down keep them warm and dry. Broad, webbed feet placed wide apart produce the typical waddling gait. The legs of diving ducks, such as pochards and mergansers, are placed so far back that the bird must stand almost upright on land. Ruddy ducks find walking so awkward that they come ashore as little as possible. But such broad feet and short legs are perfect for driving the birds swiftly through or under water.

The broad bills of ducks have numerous nerve endings enabling them to feel under water for food. Most have filters to strain food from the water. This is especially so in shovelers, whose broad spoonlike bills hide a mass of hair-like lamellae. Mergansers have toothed bills to hold slippery fish. The swans' long necks allow them to feed on bottom plants.

Geese and swans are primarily vegetarian, but ducks enjoy a mixed diet of insects, snails, and pond weeds. In the Zoo, they eat commercial duck food which contains all the nutrition they need. This is always available to them from the big cans at the side of the ponds. They forage on their own as well. If you wonder who trims the grass at the ponds' edges so neatly, it's the ducks. The feed cans also attract a number of feathered free-loaders. Pigeons by the dozens help themselves to the duck food, and wild mallards fly in from Rock Creek for a free meal. They should not be confused with the Hawaiian ducks, a very rare and endangered close relative.

A visitor may not see much active feeding. Ducks spend a lot of time preening. This is the process by which the bird repairs and maintains its plumage. Look at a feather closely. It is the most highly evolved epidermal structure known. The central shaft bears a series of barbs, which in turn lock together by minute hooks and flanges. When these separate for any reason, the bird can repair them by running the feather through its bill or smoothing the feather. In addition,







**Bottoms up, heads down, and feet kicking for balance, an Australian grey teal and an Indian spotbill check out the Zoo's new ponds for plants, seeds, snails, and insects.**

the birds spread oil from a gland above the tail over the feathers, waterproofing and conditioning them. Ducks also like to loaf in the sun or doze with the bill tucked under one wing. Like many birds, ducks and swans often rest on one leg with the other tucked up.

Most waterfowl, relying on swimming and diving for protection, molt their flight feathers all at once. They are then unable to fly for four to six weeks. If most of the colorful ducks seem to have vanished, it is because the drakes are in what is known as

eclipse plumage, a dull basic coloring which resembles the hen's usual dress. This gives them added protection in the flightless period. The drake molts about the same time that the female begins to incubate her eggs. He goes off to an isolated location to join a bachelor flock. The hens molt later when the young are able to fly. Ducks molt twice each year, barely finishing one cycle before the other starts. Drakes sport their courtship plumage in early fall.

Waterfowl are fast and powerful fliers. The canvasback has been

clocked at 70 m.p.h. Zoo birds are "grounded" either by clipping the flight feathers on one wing or by pinioning (surgically removing the outer end of one wing, rather like the loss of a finger). Clipping may seem easier, but the feathers grow back, and the bird must be clipped frequently.

With the exception of some swans, most waterfowl are very sociable. They feed and travel, loaf and sleep in large flocks. Courtship and family life are highly developed. Swans and geese are believed to mate for life. Males help guard the nest and care



for the young. Geese migrate south in family groups and return to the home-grounds together in spring. The young geese learn the migration routes from their elders, resulting in a tradition of stopovers and breeding grounds.

The handsome white Coscoroba swans from South America are a puzzle to ornithologists since they do not fit one classification. Although definitely "swanish," they have voices like geese, lores (feathers between the

beak and the eye), and a broad bill with strainers like a duck.

Ducks court and pair annually. In most temperate regions, they pair off on the wintering grounds. Since a

**The Moluccan radjah shelduck of Australia is one of four different species of shelduck at the Zoo. Typically, a female, who is often more colorful than the drake, encourages males to fight over her before selecting a mate.**



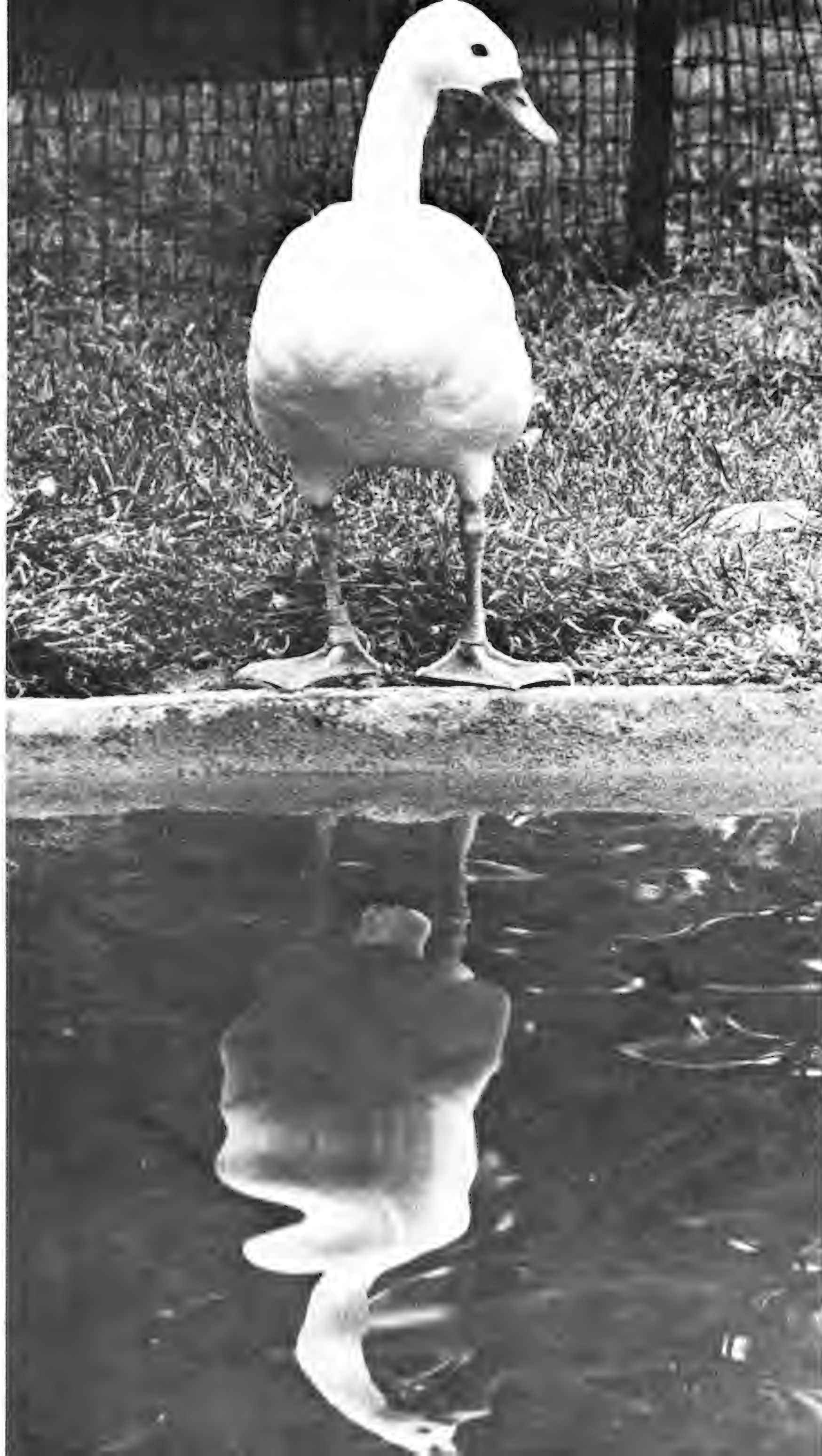


drake from Manitoba may pair with a hen from New York, many of these ducks constitute single widespread species. No related species of duck native to the same region have identical plumage or courtship displays. Female ducks appear to have innate knowledge of the patterns and display repertoire of their own species and will usually choose correctly. Drakes are less choosy, and apparently will mate with anyone who will have them. Male displays follow very definite patterns, making the most of the plumage. These displays have names, some sounding like the newer dance steps: the grunt-whistle, the down-up, and the head-up, tail up.

The four species of shelducks on exhibit have a slightly different courtship pattern. The female, who is often more colorful than her mate, incites him to attack other ducks and may make her choice on the basis of the response. All female ducks incite, but in other species the usual response of the male is one of acknowledgment. The shelduck male will attack and if he is beaten, the hen may desert him for the winner of the encounter. They form long-term pair bonds, and males may help rear the young.

The handsome mandarin duck has a spectacular display which takes full advantage of his beautiful plumage.

**An ornithological puzzle, the handsome Coscoroba swan of South America is classified as a swan but has a bill more like a duck. In the past, swans were slaughtered by the thousands for their plumage to make powder puffs and down coverings.**





The mandarin duck is one of the Chinese symbols of marital fidelity, perhaps because its courtship involves mutual preening.

Buffle heads, golden eyes, and hooded mergansers all display crests and head markings in courtship. Although we may think of them as sea or bay ducks, they nest in tree holes around lakes or ponds. There have been many stories of the mother duck carrying her young down from their

hole on her back. More often, the ducklings jump out in response to the mother's call.

Many ducks on the ponds now are young ducks which hatched at the Zoo last year. Nest boxes and shelters will be provided, and hopefully there will be many more ducklings. Man tampers with the kind of land that ducks depend on—pot holes, marshes, and flood plains. There may seem to be lots of ducks

around, but remember there were once lots of passenger pigeons. Let's not take ducks for granted.

**by Sally Tongren  
FONZ, House Guide**

**Flying far and fast in the wild, the lesser white-fronted goose breeds in Lapland and Siberia, then flies thousands of miles to winter in India, China, and Japan.**

**The Indian spotbill, with its handsomely splotched breast feathers, enjoys dozing in the sun just like other ducks on display in the new waterfowl ponds atop Bird House hill.**









# BOOKNEWS

## The Endangered Ones

by James A. Cox; Crown Publishers, Inc., 1975, 224 pp., \$14.95.

"Destroyed buildings can be rebuilt; destroyed works of art may possibly be replaced by new creations; but every animal and every flower which becomes extinct is lost forever in the most absolute of all deaths." — Joseph Wood Krutch

More people use more food, more space, more homes, and more things. The result: *less* for everything else. Its tragic impact on wildlife is well-known, but few authors have documented it so eloquently and so completely as James A. Cox in *The Endangered Ones*.

Magnificently illustrated with more than 250 original line drawings, rare engravings, and superb, full-cover portraits, this new volume describes more than 300 endangered species around the world, from addax to zebra. Here are animals both familiar and exotic: the tiger and the tahr, California condor and chub, rhino and rhea, bald eagle and bandicoot.

Case-by-case profiles include a description of each species, its habitat, current status, and threat. Introductory chapters detail the enemies (habitat destruction, indiscriminate slaughter for sport and profit, "pest/predator" control) which since 1600

have killed off more than 300 animal species. Sadly, the tempo of annihilation is quickening.

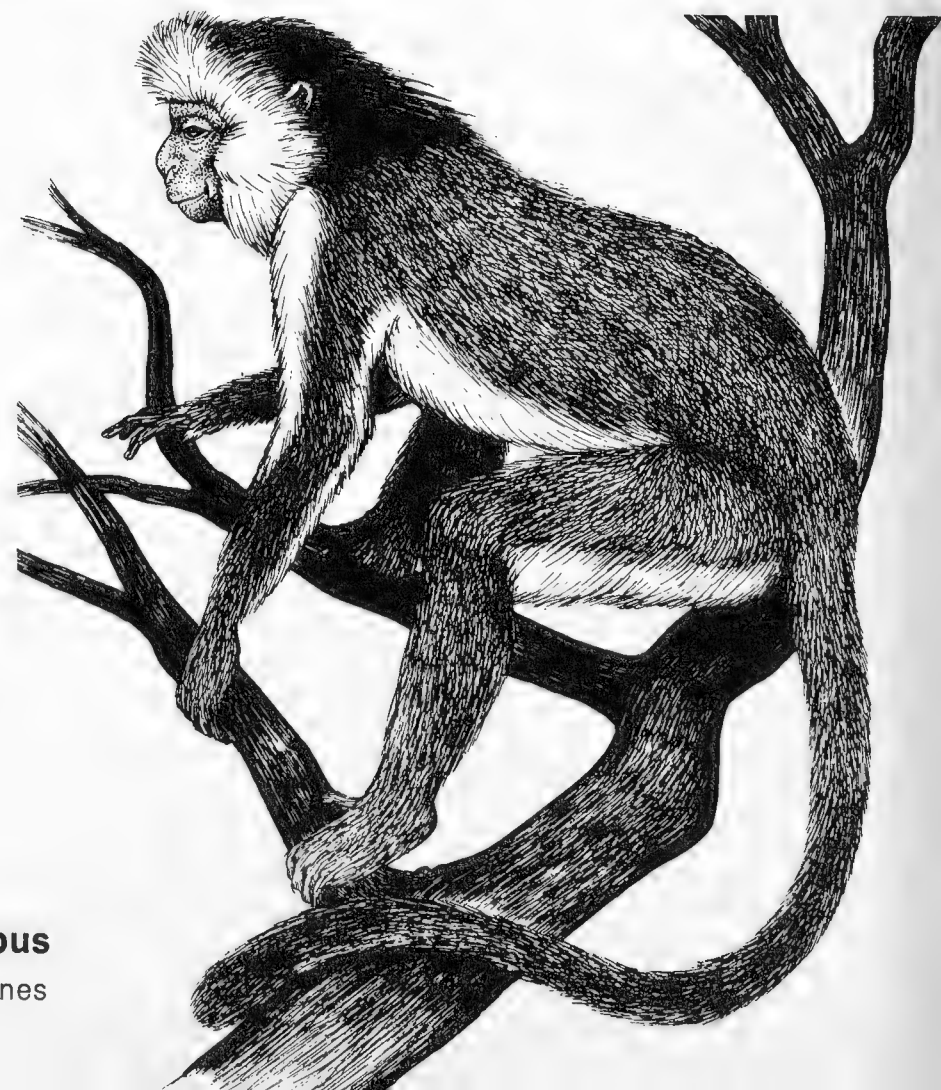
Although we have done our worst, Cox points out that we have also done our best. He reports on breeding-protection programs that have "saved" the bison, Hawaiian goose, trumpeter swan, and sea otter as proof of what can be done if people of common sense cooperate in common cause. Add to that laws and organizations like FONZ that seek to protect rare wildlife and an expanding chain of preserves and parks throughout the world. There is hope, however slight.

As author Cox puts it, "We have proved that we are the masters of nature and the tamers of the wilds. And now, while there is still a chance to do so, we must make provisions for other forms of life on the Ark called Earth—before the self-styled first-class passengers take over the entire craft."

by Sabin Robbins  
Executive Director



Tristram's woodpecker



Zanzibar red colobus

Philip Jones



# Keeping Reptiles And Amphibians

by Alfred Leutscher; Charles Scribner's Sons, 1976, 164 pp., \$7.95.

This book and the Cross sewing boxes a great-aunt gave me every Christmas for ten years have much in common. Both are immensely useful, of high quality, and share equally low coefficients of excitement. Perhaps it is sufficient that the author cared enough about reptiles and amphibians in captivity to provide the amateur collector with information needed to care for them properly. It is obvious that Leutscher, a longtime lecturer on natural history at the British Museum, has wide practical experience and success at keeping reptiles and amphibians.

The first third of the book deals with vivarium construction; diet; the diagnosis and treatment of various ailments; and, finally, breeding and rearing young. The balance of the book contains brief description of the reptiles and amphibians best suited to keep.

I particularly liked the section on outdoor vivaria for temperate zone species and the author's implied salute to the Georgetown goldfish pond which may unwittingly save a local population of amphibians from extinction by giving them an urban water hole in which to spawn unmolested. I also liked the

admission fee Leutscher charges to his conservatory which houses an eclectic collection of reptiles and amphibians. Each neighbor child is asked to bring an item of food for a resident herpeton. This approach teaches children about the dietary needs of the collection and, at the same time, cuts down some on the food budget.

Other aspects of the book troubled me. Leutscher treats his subject with a certain diffidence and clearly is not trying to recruit collectors of reptiles and amphibians. He even states that no rare specimen should be collected or bought from a dealer. Elsewhere in the book, however, his words seem to belie this laudable advice. I can be sure only that he is saying, "Don't collect MY rare and endangered species." He reports that the Natterjack (*Bufo calamita*) has become rare in Britain, asks that it "please" not be collected there and recommends going to the continent where there are "plenty." I was appalled that there even was a section on keeping crocodilians when this ancient order is fighting for survival all over the world. Leutscher says, "In the vivarium hobby small specimens are usually kept and give little trouble until they outgrow their home, when they may have to be presented to the local zoo." Conservation-minded modern zoos tend to limit their collections to breeding populations of rare species and would be most reluctant to accept the odd caiman who escaped from the laundry tub and bit the cat.

Leutscher hints at what he regards as suitable attributes in a "pet". A suitable "pet" is not noisy. For this reason he recommends against keeping tree frogs which can be disturbingly loud, especially at night and during wet weather. An ideal "pet" does not spend long intervals "just doing nothing." The Ball Python "unfortunately spends much time curled up in a tight ball and can make a disappointing pet", but "by gently handling, the author managed to get a young specimen to stop this habit." Eating habits may be another "pet" drawback. Leutscher describes prey ingestion by snakes as "a slow and deliberate process, almost painful to watch, (which) may distress some people." He adds, "It is best they not keep a snake."

My abraded sensibilities aside, this is a comprehensive, well-organized, and valuable little volume for the conscientious collector.

by Eliza Soyster  
FONZ, House Guide



# FONZ NEWS

## Free Zoo Tours For FONZ Members

Free Saturday tours of the Zoo for members proved so popular last year that FONZ is offering them this winter.

Thanks to FONZ guides who have kindly volunteered their time and expertise, members will be taken on a one- to one-and-a-half-hour walking tour of the collection with stops to see the giant pandas, white tigers, Atlas lions, and a special look at the innovative bear exhibits due to open in the spring.

These are *walking* tours so wear warm clothes and comfortable shoes. Complimentary hot cocoa and coffee will be served.

Happiness is having a special FONZ T-shirt just printed for you as one young member discovered on ZooNight. The after-hours evening for members only featured elephant management demonstrations by Al Perry, behind-the-lines tours of the Reptile House, and the chance to hold some baby corn snakes, late panda feeding, continuous puppet shows by Junior Zoo Aides, a glockenspiel concert, animal art show, and preview of the new bear exhibits. Free beer and soft drinks were served to all. "What a fabulous way to see the Zoo," exclaimed one enthusiastic member.





Reservations will be accepted no earlier than 30 days prior to the tour date for your category. Space is limited, so please call for your reservation on 232-7700. This activity is strictly limited to *members only*.

*Membership category:*

Family (adult cards—yellow)  
(junior cards—green)

Junior members under 10 must be accompanied by an adult member.

*Date:* Saturday, December 4

*Time:* 10:00 a.m.; 1:00 p.m. (identical tours)

*Membership category:*

Junior — ages 3-9 (green card)

Must be accompanied by one adult.

*Date:* Saturday, January 8

*Time:* 10:00 a.m.

*Membership category:*

Junior — ages 10-18 (green card)

No adults may accompany this tour.

*Date:* Saturday, January 8

*Time:* 1:00 p.m.

*Membership category:*

Individual (orange card)

*Date:* Saturday, February 5

*Time:* 10:00 a.m.; 1:00 p.m. (identical tours)

*Membership category:*

Couples & Seniors (red & blue cards)

*Date:* Saturday, March 5

*Time:* 10:00 a.m.; 1:00 p.m. (identical tours)

## **FONZ Pacific Trips Are Near Sell-Out**

FONZ-sponsored wildlife tours to the South Pacific and Galapagos Islands are filling up fast. Both of these unusual safaris are limited to about 20, so interested members should contact FONZ as soon as possible.

The trip to paradise—three weeks in Fiji, Australia, New Zealand, and Tahiti, departs Washington on October 7, 1977 and returns October 29. Participants will see the world-famous parade of fairy penguins and explore wilderness sanctuaries that protect koalas, kangaroos, even a unique grotto for glow worms. Special visits and receptions are being planned at major zoos.

Nine days will be spent in Australia with visits to Brisbane, Sydney (including a tour of their renowned Opera House), and Melbourne. Six days in New Zealand will feature a wildlife island cruise, Maori dancers, a barbeque in a field of steaming geysers, and a special look at the kiwis.

Although the trip is designed to provide an insider's look at the unusual wildlife of the "down under" continent, there will be several days in both Fiji and Tahiti for beachcombing, glass-bottom boat cruises, and native feasts and dances. Cost of the tour, including all transportation, tips, deluxe hotels,

and most meals, is approximately \$2700, which includes a tax-deductible \$100 contribution to FONZ.

Perhaps no islands in the world offer the abundance and variety of wildlife as the Galapagos off the coast of Ecuador. Just as this group of islands amazed Darwin and triggered his thinking on the theory of evolution, it amazes and delights today's few visitors lucky enough to explore its remote islands and inlets where giant tortoises, dragon-like land and marine iguanas, penguins, flightless cormorants, and blue-footed boobies roam. Much of the wildlife is miraculously unafraid of man. Birds land on your shoulder. Fur sea lions join you swimming. The two-week safari departs Washington July 15, 1977 and includes stopovers in the capital cities of Bogota, Columbia, and Quito, Ecuador. Optional post-tour trips include a visit to Machu Picchu, "the lost city of the Incas," and a jungle cruise down the Amazon.

The cost is approximately \$1,500 which includes a \$100 contribution to FONZ.

Both the South Pacific and Galapagos safaris are FONZ "firsts" so special efforts are being made to ensure that they will be unforgettable wildlife adventures.



